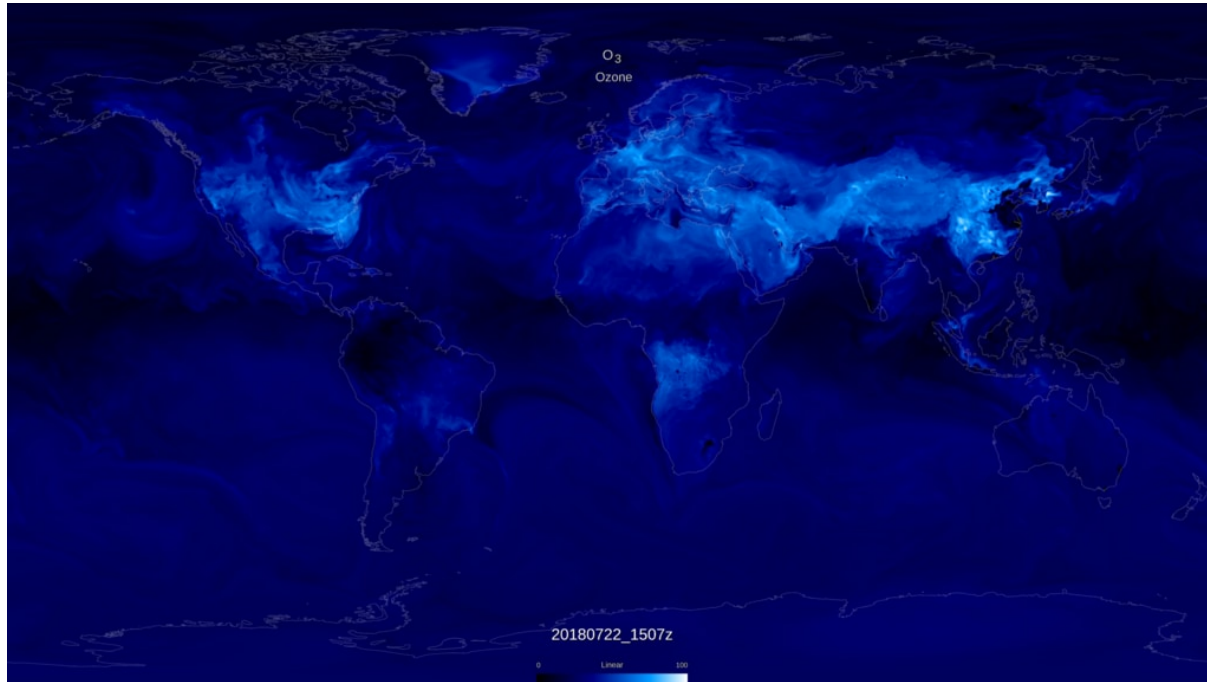


# GEOS Composition Forecasting System (GEOS-CF): Capabilities and Complexities



Ground-level ozone is harmful to both humans and the environment. The GMAO's most recent product is the GEOS Composition Forecast (GEOS-CF) system, which provides daily forecasts of atmospheric ozone and many other chemical species. GEOS-CF uses the complex GEOS-Chem atmospheric chemistry module at the high global spatial resolution of 25×25 km<sup>2</sup>. Advances in supercomputing power make this possible. GEOS-CF is able to capture the high spatio-temporal variability of pollutants, such as the diurnal cycle of ozone, and pollution formation during extreme events, such as during wildfires.

Low ozone concentrations are shown in dark blue and high concentrations, found in the afternoon near highly populated areas, are shown in white.